

SEQUENCE LISTING

<110> Yorimasa SUWA et al.

<120> TARGET PROTEIN OF ANTIDIABETIC AND NOVEL ANTIDIABETIC "INSUFUL"

<130> 1254-0305PUS1

<140> 10/569,791

<141> 2006-02-27

<150> PCT/JP04/16996

<151> 2004-11-16

<150> JP 2003/402164

<151> 2003-12-01

<160> 3

<170> PatentIn Ver. 2.0

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<211> 2617

<212> DNA

<213> Homo sapiens

<400> 1

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<212> PRT

<213> Homo sapiens

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```

```

Phe Leu His Pro Ser Glu Thr Ser Val Leu Asn Arg Leu Cys Arg Leu
    35                      40                      45

```

```

Gly Thr Asp Tyr Ile Arg Phe Thr Glu Phe Ile Glu Gln Tyr Thr Gly
    50                      55                      60

```

```

His Val Gln Gln Gln Asp His His Pro Ser Gln Gln Gly Gln Gly Gly
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```

```

Leu His Gly Ile Tyr Leu Arg Ala Phe Cys Thr Gly Leu Asp Ser Val
    85                      90                      95

```

```

Leu Gln Pro Tyr Arg Gln Ala Leu Leu Asp Leu Glu Gln Glu Phe Leu
   100                      105                      110

```

```

Gly Asp Pro His Leu Ser Ile Ser His Val Asn Tyr Phe Leu Asp Gln
   115                      120                      125

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Phe Gln Leu Leu Phe Pro Ser Val Met Val Val Val Glu Gln Ile Lys
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```

```

Ser Gln Lys Ile His Gly Cys Gln Ile Leu Glu Thr Val Tyr Lys His
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Ser Cys Gly Gly Leu Pro Pro Val Arg Ser Ala Leu Glu Lys Ile Leu
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```

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Ala Val Cys His Gly Val Met Tyr Lys Gln Leu Ser Ala Trp Met Leu
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His	Gly	Leu	Leu	Leu	Asp	Gln	His	Glu	Glu	Phe	Phe	Ile	Lys	Gln	Gly	195	200	205
Pro	Ser	Ser	Gly	Asn	Val	Ser	Ala	Gln	Pro	Glu	Glu	Asp	Glu	Glu	Asp	210	215	220
Leu	Gly	Ile	Gly	Gly	Leu	Thr	Gly	Lys	Gln	Leu	Arg	Glu	Leu	Gln	Asp	225	230	235
Leu	Arg	Leu	Ile	Glu	Glu	Glu	Asn	Met	Leu	Ala	Pro	Ser	Leu	Lys	Gln	245	250	255
Phe	Ser	Leu	Arg	Val	Glu	Ile	Leu	Pro	Ser	Tyr	Ile	Pro	Val	Arg	Val	260	265	270
Ala	Glu	Lys	Ile	Leu	Phe	Val	Gly	Glu	Ser	Val	Gln	Met	Phe	Glu	Asn	275	280	285
Gln	Asn	Val	Asn	Leu	Thr	Arg	Lys	Gly	Ser	Ile	Leu	Lys	Asn	Gln	Glu	290	295	300
Asp	Thr	Phe	Ala	Ala	Glu	Leu	His	Arg	Leu	Lys	Gln	Gln	Pro	Leu	Phe	305	310	315
Ser	Leu	Val	Asp	Phe	Glu	Gln	Val	Val	Asp	Arg	Ile	Arg	Ser	Thr	Val	325	330	335
Ala	Glu	His	Leu	Trp	Lys	Leu	Met	Val	Glu	Glu	Ser	Asp	Leu	Leu	Gly	340	345	350
Gln	Leu	Lys	Ile	Ile	Lys	Asp	Phe	Tyr	Leu	Leu	Gly	Arg	Gly	Glu	Leu	355	360	365
Phe	Gln	Ala	Phe	Ile	Asp	Thr	Ala	Gln	His	Met	Leu	Lys	Thr	Pro	Pro	370	375	380
Thr	Ala	Val	Thr	Glu	His	Asp	Val	Asn	Val	Ala	Phe	Gln	Gln	Ser	Ala	385	390	395
His	Lys	Val	Leu	Leu	Asp	Asp	Asp	Asn	Leu	Leu	Pro	Leu	Leu	His	Leu	405	410	415
Thr	Ile	Glu	Tyr	His	Gly	Lys	Glu	His	Lys	Ala	Asp	Ala	Thr	Gln	Ala	420	425	430
Arg	Glu	Gly	Pro	Ser	Arg	Glu	Thr	Ser	Pro	Arg	Glu	Ala	Pro	Ala	Ser	435	440	445
Gly	Trp	Ala	Ala	Leu	Gly	Leu	Ser	Tyr	Lys	Val	Gln	Trp	Pro	Leu	His	450	455	460
Ile	Leu	Phe	Thr	Pro	Ala	Val	Leu	Glu	Lys	Tyr	Asn	Val	Val	Phe	Lys	465	470	475
Tyr	Leu	Leu	Ser	Val	Arg	Arg	Val	Gln	Ala	Glu	Leu	Gln	His	Cys	Trp	485	490	495

Ala Leu Gln Met Gln Arg Lys His Leu Lys Ser Asn Gln Thr Asp Ala
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 Ile Lys Trp Arg Leu Arg Asn His Met Ala Phe Leu Val Asp Asn Leu
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 Gln Tyr Tyr Leu Gln Val Asp Val Leu Glu Ser Gln Phe Ser Gln Leu
 530 535 540
 Leu His Gln Ile Asn Ser Thr Arg Asp Phe Glu Ser Ile Arg Leu Ala
 545 550 555 560
 His Asp His Phe Leu Ser Asn Leu Leu Ala Gln Ser Phe Ile Leu Leu
 565 570 575
 Lys Pro Val Phe His Cys Leu Asn Glu Ile Leu Asp Leu Cys His Ser
 580 585 590
 Phe Cys Ser Leu Val Ser Gln Asn Leu Gly Pro Leu Asp Glu Arg Gly
 595 600 605
 Ala Ala Gln Leu Ser Ile Leu Val Lys Gly Phe Ser Arg Gln Ser Ser
 610 615 620
 Leu Leu Phe Lys Ile Leu Ser Ser Val Arg Asn His Gln Ile Asn Ser
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 Asp Leu Ala Gln Leu Leu Leu Arg Leu Asp Tyr Asn Lys Tyr Tyr Thr
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 Gln Ala Gly Gly Thr Leu Gly Ser Phe Gly Met
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<210> 3
 <211> 667
 <212> PRT
 <213> Homo sapiens

<400> 3

Met Ile His Glu Leu Leu Leu Ala Leu Ser Gly Tyr Pro Gly Ser Ile
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 Phe Thr Trp Asn Lys Arg Ser Gly Leu Gln Val Ser Gln Asp Phe Pro
 20 25 30
 Phe Leu His Pro Ser Glu Thr Ser Val Leu Asn Arg Leu Cys Arg Leu
 35 40 45
 Gly Thr Asp Tyr Ile Arg Phe Thr Glu Phe Ile Glu Gln Tyr Thr Gly
 50 55 60

His Val Gln Gln Gln Asp His His Pro Ser Gln Gln Gly Gln Gly Gly
65 70 75 80

Leu His Gly Ile Tyr Leu Arg Ala Phe Cys Thr Gly Leu Asp Ser Val
85 90 95

Leu Gln Pro Tyr Arg Gln Ala Leu Leu Asp Leu Glu Gln Glu Phe Leu
100 105 110

Gly Asp Pro His Leu Ser Ile Ser His Val Asn Tyr Phe Leu Asp Gln
115 120 125

Phe Gln Leu Leu Phe Pro Ser Val Met Val Val Val Glu Gln Ile Lys
130 135 140

Ser Gln Lys Ile His Gly Cys Gln Ile Leu Glu Thr Val Tyr Lys His
145 150 155 160

Ser Cys Gly Gly Leu Pro Pro Val Arg Ser Ala Leu Glu Lys Ile Leu
165 170 175

Ala Val Cys His Gly Val Met Tyr Lys Gln Leu Ser Ala Trp Met Leu
180 185 190

His Gly Leu Leu Leu Asp Gln His Glu Glu Phe Phe Ile Lys Gln Gly
195 200 205

Pro Ser Ser Gly Asn Val Ser Ala Gln Pro Glu Glu Asp Glu Glu Asp
210 215 220

Leu Gly Ile Gly Gly Leu Thr Gly Lys Gln Leu Arg Glu Leu Gln Asp
225 230 235 240

Leu Arg Leu Ile Glu Glu Glu Asn Met Leu Ala Pro Ser Leu Lys Gln
245 250 255

Phe Ser Leu Arg Val Glu Ile Leu Pro Ser Tyr Ile Pro Val Arg Val
260 265 270

Ala Glu Lys Ile Leu Phe Val Gly Glu Ser Val Gln Met Phe Glu Asn
275 280 285

Gln Asn Val Asn Leu Thr Arg Lys Gly Ser Ile Leu Lys Asn Gln Glu

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Gln	Leu	Lys	Ile	Ile	Lys	Asp	Phe	Tyr	Leu	Leu	Gly	Arg	Gly	Glu	Leu
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Phe	Gln	Ala	Phe	Ile	Asp	Thr	Ala	Gln	His	Met	Leu	Lys	Thr	Pro	Pro
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His	Lys	Val	Leu	Leu	Asp	Asp	Asp	Asn	Leu	Leu	Pro	Leu	Leu	His	Leu
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Thr	Ile	Glu	Tyr	His	Gly	Lys	Glu	His	Lys	Ala	Asp	Ala	Thr	Gln	Ala
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Ile	Leu	Phe	Thr	Pro	Ala	Val	Leu	Glu	Lys	Tyr	Asn	Val	Val	Phe	Lys
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Tyr	Leu	Leu	Ser	Val	Arg	Arg	Val	Gln	Ala	Glu	Leu	Gln	His	Cys	Trp
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Ala	Leu	Gln	Met	Gln	Arg	Lys	His	Leu	Lys	Ser	Asn	Gln	Thr	Asp	Ala
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Ile	Lys	Trp	Arg	Leu	Arg	Asn	His	Met	Ala	Phe	Leu	Val	Asp	Asn	Leu
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Gln Tyr Tyr Leu Gln Val Asp Val Leu Glu Ser Gln Phe Ser Gln Leu
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Leu His Gln Ile Asn Ser Thr Arg Asp Phe Glu Ser Ile Arg Leu Ala
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His Asp His Phe Leu Ser Asn Leu Leu Ala Gln Ser Phe Ile Leu Leu
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Lys Pro Val Phe His Cys Leu Asn Glu Ile Leu Asp Leu Cys His Ser
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Phe Cys Ser Leu Val Ser Gln Asn Leu Gly Pro Leu Asp Glu Arg Gly
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Ala Ala Gln Leu Ser Ile Leu Val Lys Gly Phe Ser Arg Gln Ser Ser
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Leu Leu Phe Lys Ile Leu Ser Ser Val Arg Asn His Gln Ile Asn Ser
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Asp Leu Ala Gln Leu Leu Leu Arg Leu Asp Tyr Asn Lys Tyr Tyr Thr
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Gln Ala Gly Gly Thr Leu Gly Ser Phe Gly Met
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